

Status of the Claims

Claims 1-7. (Canceled)

8. (Currently Amended) An imaging system comprising:

an atomizer that delivers ~~said a~~ reagent to ~~said a~~ specimen plate as a spray of atomized liquid; **and**

a detector for detecting electromagnetic radiation, wherein said electromagnetic radiation is emitted when target events occur, **wherein** said target events **are** triggered by **said** reagent ~~deposited on a specimen plate;~~ and **wherein said detector is capable of determining a plurality of locations on said specimen plate from which said electromagnetic radiation is emitted corresponding to a plurality of target events occurring at said locations.**

9. (Original) The imaging system of claim 8 further comprising a positioner; wherein said positioner moves said specimen plate between a first position in which said specimen plate receives said atomized liquid and a second position in which said detector detects said target events.

10. (Currently Amended) The imaging system of claim 8 further comprising an environmental enclosure, wherein ~~said detector and said atomizer~~ are **is** disposed within said environmental enclosure.

11. (Original) The imaging system of claim 8 wherein said detector detects visible spectrum radiation.

12. (Original) The imaging system of claim 11 further comprising an excitation radiation source that delivers excitation radiation to said reagent on said specimen plate.

13. (Original) The imaging system of claim 8 wherein said detector detects infrared spectrum radiation.

14. (Original) The imaging system of claim 8 further comprising a mask that is disposed between said specimen plate and said atomizer; said mask defining a plurality of openings through which said atomized liquid passes and is received by said specimen plate.

15. (Original) The imaging system of claim 14 further comprising a controlled voltage source that is electrically connected to said atomizer, said mask and an electrically-conductive sub-plate that is disposed beneath said specimen plate.

16. (Currently Amended) A method comprising:
atomizing a reagent;
delivering said atomized reagent to a specimen plate; and
detecting electromagnetic radiation that is emitted when a target events occurs, wherein said target events ~~is~~ **are** triggered by said reagent, **and determining locations of origin on said specimen plate of said detected electromagnetic radiation, which locations correspond to locations of said target events.**

17. (Original) The method of claim 16 wherein the step of atomizing comprises using ultrasonic vibration to form micro-droplets of said reagent.

18. (Original) The method of claim 16 wherein the step of delivering comprises passing said atomized reagent through a mask.

19. (Original) The method of claim 18 wherein the step of delivering further comprises electrostatically focusing said reagent by applying a potential to said mask, said atomized reagent, and an electrically conductive sub-plate that is disposed beneath said specimen plate.

20. (Original) The method of claim 16 wherein the step of detecting comprises detecting visible spectrum radiation.

21. (Original) The method of claim 16 wherein the step of detecting comprises detecting infrared spectrum radiation.

22. (Original) The method of claim 16 further comprising:
positioning said specimen plate in a first position to receive said atomized reagent; and
positioning said specimen plate in a second position to detect said target event.

23. (New) An imaging system comprising:
an atomizer that delivers a reagent to a specimen plate as a spray of atomized liquid;
a housing, wherein said atomizer is disposed in said housing; and
a detector for detecting electromagnetic radiation, wherein said electromagnetic radiation is emitted when target events occur, wherein said target events are triggered by said reagent.

24. (New) The imaging system of claim 23 wherein said detector is disposed in said housing.

25. (New) The imaging system of claim 23 wherein said atomizer comprises an ultrasonic atomizer.

26. (New) The imaging system of claim 23 further comprising a mask, wherein said mask is disposed between said specimen plate and said atomizer, and wherein said mask defines a plurality of openings through which said atomized liquid passes and is received by said specimen plate.